

# EP 1239

## Fast Flow Low Viscosity Epoxy Adhesive

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A		Transparent	Visual
Color / Component B		Transparent	Visual
Mixing Ratio (A:B)	By weight	2 :1	
Density (as mixed)	Gram /cc	1.01	ASTM D792
Viscosity as Mixed at 25°C	cPs	600	ASTM D2196
Property as Cured			
Color		Transparent	Visual
Hardness	Shore A	60	DMA
Dielectric Strength	Volt/mil AC	> 500	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+12	ASTM D257
Coefficient of Thermal Expansion	ppm/C	75 to 125	IPC-TM-650
Adhesion (Al/Al lap shear)	Psi	> 1800	ASTM D1002
Tg	°C	55	DMA
Temperature Usage	°C	-80 to 200	TGA
Cure Profile			
Hardening at 25°C	Hour	4 ~ 6	Internal Method
Cure at 25°C	Hour	10 ~ 12	Internal Method
Cure at 80°C	Hour	1	DSC
Cure at 110°C	Minute	30	DSC
Pot / Work Life at 25°C	Minute	90	Viscosity double

These figures are only intended as a guide and should not be used in preparing specifications.

### Processing Instruction

**Important!** Only components A and B with the same lot number may be processed together! Any possible air bubbles in mixing or potting process can be removed by vacuum. Typically a thermal cure (e.g. 110°C, 30 min) will give better result than room temperature cure.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions can be obtained by contacting directly to United Adhesives, Inc.

### Characteristics

EP 1239 is an epoxy-based low viscosity adhesive for impregnating, coating, potting, and bonding electronic components and devices. It is a two-component, readily flowable, addition-curing system that cures at room temperature or elevated temperature to provide strong bonding to silicon, flip chip, BGA, ceramics, LTCC, aluminum, copper, stainless steel, etc. The reduced rigidity also provides better thermal cycle performances. EP 1239 is sprayable and dispensable.

### Special Features and Benefits

- Fast flow for coating, potting and impregnating
- Reduced rigidity for stress compliance
- High structural bonding strength
- Low bleeding, low volatile
- Low ionic content

### Typical Applications

- Aerospace electronics
- Automotive electronics
- Semiconductor and Telecommunications
- Sealing of electronic devices
- Impregnating / coating of components
- Structural bonding or potting
- Resistance to thermal vibration

EP 1239 has a shelf life of at least 12 months when stored at ambient in the originally sealed container.

### Storage

EP 1239 has a shelf life of at least 12 months when stored at ambient in the originally sealed container. The 'Best use before end' date of each batch appears on the product label. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

### Safety information

General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from United Adhesives, Inc.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to United Adhesives Inc.